

CLAIMS

1. A portable pump comprising at least one rotating elliptical plate means mounted on a rotating shaft means, which shaft means runs through the center of gravity of the plate means and whose axis is at an angle other than 90 degrees from the plane of the elliptical plate means, and which shaft means is keyed or otherwise attached to the elliptical plate means such that rotational movement of the rotating shaft means about its axis is transferred to the elliptical plate means; mechanical support and bearing means to provide rotational support to the rotating shaft means; an elliptical plate follower means affixed with rollers or bearing means positioned to bear on the top and bottom surfaces of the elliptical plate means at a fixed distance from the axis of the rotating shaft means; rollers and roller races or bearing means to allow linear movement of the elliptical plate follower means only in a direction parallel to the rotating shaft means axis; a well pump tube means with a bottom check valve means affixed by mechanical attachment means to the elliptical plate follower means so that horizontal rotation of the rotating shaft means causes filling, lifting and draining of the pump tube and check valve means so as to pump water or other fluids from a well.
2. A pump according to claim 1 wherein said pump tube and check valve means are replaced by a piston, confining cylinder, and check valve means for pulling a partial vacuum, compressing a fluid, or pumping flowable material.
3. A pump according to claim 1 where in the rotation of the rotating shaft means is constant so that the pumping rate is also constant.
4. A pump according to claim 2 where in the rotation of the rotating shaft means is constant so that the evacuation, compressive rate, or flowable material rate is also constant.
5. A pump according to claim 1 that is used for well development (agitation and removal of fines from the well sand pack) when the pump tube means is large in comparison to the inside diameter of the well.